

children with malignant disease receiving phenothiazines for nausea, cerebral metastases or irradiation effects may be considered (Cottom and Newman, 1966).

The acute toxic reactions to phenothiazines are self-limiting, the symptoms subsiding in 24 to 48 hours. They can, however, be rapidly and specifically relieved by the anticholinergic/anti-histamine group of drugs commonly used for the treatment of Parkinsonism. Such a drug is benztropine methanesulphonate which has been in use since 1952 and is especially effective in relieving 'frozen states' (Doshay, 1956). It has very few side effects, these being mainly due to its mild anticholinergic actions. Given intramuscularly it acts in about 10 minutes and maximally at half an hour, but intravenously it relieves a highly alarming and stressful state almost instantly.

The phenothiazine group of drugs are frequently prescribed to children for their anti-emetic action and the serious nature of the toxic reactions is not widely appreciated. They are commonly seen with overdoses, but may also occur with therapeutic doses. Intoxication is particularly liable to occur in children and is predisposed to by states of fever or dehydration (Duffy, 1971). It is suggested that the phenothiazines should be used with great caution in childhood and avoided if possible. In any case of dyskinesia it is most important to take a full drug history including those prescribed for other members of the household.

Summary

Two cases of perphenazine-induced dyskinetic toxic state are described. In each the symptoms were rapidly relieved by intravenous benztropine. Toxic extrapyramidal reactions after phenothiazine administration are common in children and the diagnosis should be considered in any case of obscure dyskinesia.

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Prolonged obstructive jaundice and haemangiomas

Report of 2 cases

Haemangiomas are often present at birth, or may appear within the first few months of life. They are for the most part confined to the skin or subcutaneous tissue, but occasionally involve other organs. Few cases require treatment, as spontaneous regression is almost invariable by 6 to 7 years of age (O'Brien, 1964).

Prolonged jaundice of the obstructive type in patients with haemangiomas of the skin and placenta have not been previously described, and 2 such patients are presented.

Case reports

Case 1. A male infant of 3 weeks was admitted on account of prolonged jaundice. There was no family history of jaundice or vascular tumours. Pregnancy and delivery were uncomplicated. The birthweight was 3.35 kg, length 52 cm. A large tumour (7 × 5 × 5 cm) on the placenta at the insertion of the umbilical cord had been noted. Shortly after birth, small red raised spots 2-5 mm diameter on the patient's face were noted, and within the next few days several similar lesions of the 'strawberry naevus' type appeared on other parts of the body. Sepsis was suspected, and a course of ampicillin and kanamycin was given.

On admission the infant was severely jaundiced, but his overall condition was good. Physical examination revealed haemangiomas (diameter 1-4 mm) on the skin, buccal mucosa, anal mucosa, and iris (Fig.). Moderate hepatosplenomegaly was present.

While in hospital his stools were described as being light yellow, but never clay-coloured. Bile was present in the urine. Weight gain was normal. Jaundice of the obstructive type was suspected and exploratory laparotomy was considered. Liver function tests were inconclusive, with normal alkaline phosphatases, raised SGPT (Table), and a high fraction (~70%) of conjugated bilirubin. Thrombocyte count and coagulation status (fibrinogen, prothrombin, thromboplastin time, kaolincephalin time, and fibrinolysis) were normal. A liver scintigraph was normal. From the age of 5 weeks the haemangiomas started to diminish, and simultaneously the serum bilirubin level began to fall.



FIG.—Case 1. Similar sized multiple naevi were also present on the trunk.

At the time of discharge at 12 weeks, psychomotor development was normal. The jaundice had disappeared and only cicatricial remnants of the haemangiomas remained in the skin. Microscopy of the placenta showed a tumour of the chorioangioma type without signs of malignancy. A skin biopsy taken at the age of 2 weeks showed a benign capillary haemangioma. A second biopsy 2 months later showed an angioma in regression.

Case 2. A well infant was admitted at 14 days on account of jaundice. There was no family history of jaundice or haemangiomas. Pregnancy was uncomplicated. Delivery was by caesarean section due to fetal distress. Birthweight was 3.79 kg, length 52 cm. As the amniotic fluid was stained with meconium, he was treated prophylactically with kanamycin. Blood cultures were negative. The placenta weighed 1.58 kg, and a large tumour (6 × 5 × 3 cm) was situated between the insertion of the umbilical cord and the placental edge.

At birth multiple raised haemangiomas were observed in the skin. Their size and number increased during the first week, the largest reaching a diameter of 5 mm. Examination revealed jaundice, slight hepatosplenomegaly, and haemangiomas. Intermittently, clay-coloured stools and dark urine containing bile were seen. The infant's overall condition was good, and he thrived during hospitalization. The liver function tests pointed to an obstructive jaundice; between 4 and 6 weeks repeated tests showed that 70–95% of the serum bilirubin was conjugated. Serum enzyme values are given in the Table.

Serological tests for infections were negative, and there was no indication of a haemolytic condition or metabolic disturbance. A diagnostic test for inspissated bile syndrome with magnesium sulphate was negative. An exploratory laparotomy was considered, but from the age of 4 weeks slow regression of the cutaneous haemangiomas was observed, and serum bilirubin fell concomitantly. The patient was discharged aged 6 weeks. At 5 months weight gain and psychomotor development was normal, and the hepatosplenomegaly and skin haemangiomas had disappeared. The liver function tests were normal, but a slight generalized hyperaminoaciduria with positive Fehling reaction in the urine was still found. Skin biopsy at 8 weeks showed a capillary haemangioma healing by fibrosis. The placental tumour was histologically a benign chorioangioma.

Discussion

The following common features can be seen in these 2 patients. (1) Walnut-sized placental haemangiomas in combination with several cutaneous haemangiomas, increasing in size during the first and second week, followed by spontaneous regression occurring after the 4th or 5th week of age.

TABLE
Liver enzymes (units/l. serum)

Time of test (mth)	Case 1			Case 2		
	Alkaline phosphatase	G-P-transaminase	Lactic dehydrogenase	Alkaline phosphatase	G-P-transaminase	Lactic dehydrogenase
1	134	280	780	204	205	1000
2	139			220	280	605
3		124	430		140	580
5				172	92	460
6				155	49	

(2) Prolonged jaundice of obstructive type, reaching maximum severity during the second and third week, thereafter regressing concomitantly with the disappearance of the haemangiomas and the hepatomegaly.

The occurrence of the same type of tumour in both the placenta and the fetus has been reported only occasionally (Strauss, Benirschke, and Driscoll, 1967). The situation could be interpreted as a primary tumour of the placenta with metastatic lesion, but most writers (O'Brien, 1964; Strauss, *et al.*, 1967) regard angiomas and chorioangiomas as benign hamartomas, so that the situation might be interpreted as a disturbance of development in the fetal vascularization common to both placenta and fetus. This is in accordance with the fact that chorioangiomas take their blood supply from branches of the fetal vessels (Strauss *et al.*, 1967). The latter view fits better with the benign clinical course and the histological picture than does the concept of a metastatic tumour.

Regarding the combination of haemangiomas and prolonged obstructive jaundice with the subsequent simultaneous regression of the two conditions, multiple liver haemangiomas have been described together with cutaneous haemangiomas. Crocker and Cleland (1957) reported 3 cases of infantile liver haemangioendothelioma without cutaneous haemangiomas; 1 of the patients was jaundiced and died after 16 days and necropsy revealed obstruction of the biliary excretory system by an angioma and absence of bile in the extrahepatic biliary system. Hsia *et al.* (1952) reported a case of prolonged obstructive jaundice and haemangioendothelioma at necropsy. Finally Burman, Mansell, and Warin (1967) described a case of jaundice in an infant with multiple haemangiomas, who died at 3 weeks. Liver haemangiomas, representing different stages of histological development, were found at necropsy.

The combination of placental haemangioma and prolonged jaundice has been described in a 3-month-old child by DeCosta *et al.* (1956). There were no abnormal findings at exploratory laparotomy and during the postoperative period the jaundice disappeared spontaneously. There is no information concerning the observation of haemangiomas in this child.

It is well known that cysts, lymph nodes, or other tumours in the porta hepatis may compress the biliary excretory system and cause obstructive

jaundice. A lowered bilirubin clearance might also follow extensive destruction of the liver parenchyma from the angiomas. Burman *et al.* (1967) explained the jaundice in their patient as caused by the loss of the liver tissue. In our cases, the high fraction of conjugated bilirubin was against this.

Liver biopsy was not performed because of the risk of intraperitoneal bleeding. The negative result of scintigraphy only excludes haemangiomas of a certain size. Though haemangiomas in the porta hepatis were not shown in our 2 patients, it seems probable that haemangiomas did obstruct the main bile ducts, and that the obstruction disappeared when the tumours regressed.

Prolonged obstructive neonatal jaundice still presents major problems of management, and the cases reported may provide additional grounds for a policy of delaying exploratory laparotomy to observe if spontaneous recovery will occur.

Summary

Two patients with congenital cutaneous haemangiomas and prolonged obstructive jaundice are described. From the 5th week of age both the cutaneous haemangiomas and the jaundice regressed. It was concluded that haemangiomas obstructed the main bile ducts and that the obstruction disappeared as the haemangiomas regressed.

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